IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION OF: REINER FISCHER ET AL

APPLICATION SERIAL NO.: 10/559,703

FILING DATE: DECEMBER 7, 2005

EXAMINER NAME: DANIELLE D. SULLIVAN

EXAMINER ART UNIT: 1616

TITLE: N-HETEROCYCLYLPHENYL- SUBSTITUTED CYCLIC KETOENOLS

APPEAL BRIEF UNDER 37 C.F.R. § 41.37

Mail Stop APPEAL BRIEF – PATENTS
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

I. Real Party in Interest

The real party in interest is Bayer CropScience AG, Monheim, Germany, the assignee of record.

II. Related Appeals and Interferences

Appellants' legal representative is not aware of any prior or pending appeal, judicial proceeding, or interference, which may be related to, directly affect or be directly affected by, or have a bearing on the Board's decision in the pending appeal.

III. Status of Claims

Claims 37-40 and 61[1] are pending and are under appeal. Claims 1-36, 41-60, and 62-70 have been previously cancelled. Claims 1-35 were cancelled by Appellants in the Preliminary Amendment submitted on June 12, 2006. Claim 36 was cancelled by Appellants in the Response submitted on December 5, 2008. Claims 42-60 and 65-70 were cancelled by Appellants in the Response submitted on April 15, 2008. Claims 37-40 and 61 stand finally rejected under 35 U.S.C. § 103(a). Appellants appeal all of the rejections of each of Claims 37-40 and 61.

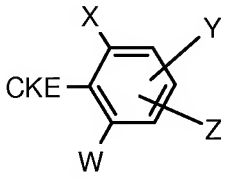
[1] As Claims 37-40 and 61 were each rejected in the Advisory Action mailed on August 27, 2009, it is Appellants understanding that Claim 61 has been rejoined and examined by the Examiner.

IV. Status of Amendments

On August 10, 2009, Appellants filed an Amendment to the Final Office Action mailed June 10, 2009. Appellants amended Claims 37-40 and Claim 61 in the Amendment. The Examiner subsequently entered the amendments in the Advisory Action mailed August 27, 2009.

V. Summary of Claimed Subject Matter

A. Independent Claim 37: The subject matter of independent Claim 37 is directed to a compound of formula I



(I)

wherein "CKE," "X," "W," and "Z" are defined according to Claim 37. Specification, for example, at page 3, lines 12 – page 4, line 12 and page 63, line 5 – page 65, line 10.

(i) Dependent Claim 38: The subject matter of dependent Claim 38 is directed to a compound of formula I, wherein "CKE," "X," "W," and "Z" are defined according to Claim 38. Specification, for example, at page 3, lines 12 – page 4, line 12 and page 63, line 5 – page 65, line 10.

(ii) Dependent Claim 39: The subject matter of dependent Claim 39 is directed to a compound of formula I, wherein "CKE," "X," "W," and "Z" are defined according to Claim 39. Specification, for example, at page 3, lines 12 – page 4, line 12 and page 63, line 5 – page 65, line 10.

(iii) Dependent Claim 40: The subject matter of dependent Claim 40 is directed to a compound of formula I, wherein "CKE," "X," "W," and "Z" are defined according to Claim 40. Specification, for example, at page 3, lines 12 – page 4, line 12 and page 63, line 5 – page 65, line 10.

(iv). Dependent Claim 61: A composition comprising one or more compounds of formula (I) according to Claim 37 and one or more extenders and/or surfactants. Specification, for example, at page 33, lines 20 – 21 and page 63, line 5 – page 65, line 10.

VI. Grounds of Rejection to be Review on Appeal

Whether Claims 37-40 and 61 are unpatentable under 35 U.S.C. § 103(a) over Lieb *et al.* (U.S. Patent No. 6,451,843).

VII. Arguments

The Examiner's assertion that Claims 37-40 and 61 are obvious under 35 U.S.C. § 103(a) over U.S. Patent No. 6,451,843("Lieb *et al.*") is improper. At the outset, as acknowledged by the Examiner, Lieb *et al.* does not teach or suggest a compound or composition which includes all of the claimed elements.[2] Specifically, Lieb *et al.* fails to teach or suggest a compound including a pyrazolyl substituent group, let alone a compound including a substituted pyrazolyl substituent group at position "Z" of Formula I as set forth in Claim 37. The Examiner also fails to provide any motivation whatsoever to modify the compounds of Lieb *et al.* and assemble a compound with a pyrazolyl group at the "Z" substituent position. Additionally, the Examiner erred when asserting that the Declaration was insufficient for allegedly not comparing the test compound to the closest prior art compound. For at least the reasons that follow, Appellants respectfully disagree.

(1) Lieb *et al.* does not render Claims 37-40 and 61 obvious under 35 U.S.C. § 103(a)

The Supreme Court recently addressed the issue of obviousness in *KSR International Co. v. Teleflex Inc.*, 127 S. Ct. 1727 (2007). The Court stated that the *Graham v. John Deere Co. of Kansas City*, 383 U.S. 1 (1966), factors control an obviousness inquiry. Those factors are: 1) "the scope and content of the prior art"; 2) the "differences between the prior art and the claims"; 3) "the level of ordinary skill in the pertinent art"; and 4) objective evidence of nonobviousness. *KSR*, 127 S. Ct. at 1734 (quoting *Graham*, 383 U.S. at 17-18). While the *KSR* Court rejected a rigid application of the teaching, suggestion, or motivation ("TSM") test in an obviousness inquiry, the Court acknowledged the importance of identifying "a reason that would have prompted a person of ordinary skill in the relevant field to combine the elements in the way the claimed new invention does" in an obviousness determination. *KSR*, 127 S. Ct. at 1731. Moreover, the Court indicated that there is "no necessary

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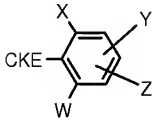
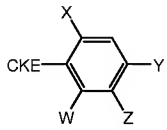
[2] As set forth in Claim 37, Formula I is described as follows: 

(I). The base structure for Lieb *et al.* is as follows: 

. Lieb *et al.*, for example, at column 2, lines 50-60. Appellants point out that members of group "Z" of Lieb *et al.* are not found in the definition of group "Z" of Appellants' Formula I but are instead found (in part) in the definition of group "Y" of Appellants' Formula I.

inconsistency between the idea underlying the TSM test and the *Graham* analysis." *Id.* As long as the test is not applied as a "rigid and mandatory" formula, that test can provide "helpful insight" to an obviousness inquiry. *Id.* In this regard, "[r]ejections on obviousness grounds cannot be sustained by mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness." *KSR,* 127 S.Ct. at 1741 (quoting *In re Kahn,* 441 F.3d 977, 988 (Fed. Cir. 2006) (emphasis added)).

(a) Lieb *et al.* does not teach or suggest the compounds of Claims 37-40 and 61 wherein substituted position "Z " is a pyrazolyl group.

Appellants disagree with the Examiner's basis for the obviousness rejection under 35 U.S.C. § 103(a). In rejecting the claims, the Examiner acknowledges that Lieb *et al.* fails to disclose or suggest all of the claim elements. Final Office Action at pages 3-4. Specifically, the Examiner acknowledges that Lieb *et al.* does not teach a compound with a pyrazolyl group. *Id.* at page 4. In accounting for this deficiency, the Examiner asserts that "[h]owever, a pyrazole is a heterocyclic group and is therefore taught by Lieb *et al.*" *Id.* The Examiner further states that "[i]t would have been obvious to one of ordinary skill in the art at the time of the invention in view of Lieb *et al.* to exemplify a compound where the Y heterocyclic group is a pyrazolyl or benzpyrazolyl."[3] *Id.* Appellants disagree.

The Examiner provides no motivation whatsoever to modify the generic heterocycle group set forth in Lieb *et al.* into a pyrazolyl group, let alone a chlorinated pyrazolyl. At best, the Examiner provides a conclusory rationale for altering a heterocycle to a substituted pyrazolyl group by asserting that "[o]ne would have been motivated to include a substituted pyrazole because it is a well known heterocyclic in the art that possesses two nitrogen atoms and three carbon atoms." *Id.* However, this statement provides no suggestion of why one of ordinary skill in the art would be motivated to modify the generic "heterocycle" group of Lieb *et al.* to a substituted pyrazolyl group. Rather, the Examiner provides only a general description of the characteristics of a pyrazole group by noting that a "substituted pyrazole …possesses two nitrogen atoms and three carbon atoms." *Id.* However, this is not enough to render the claims obvious.

Moreover, Lieb *et al.* fails to provide motivation to specifically select a heterocycle

[3] Appellants note that substituent group "Y" in Lieb *et al.* overlaps with substituent group "Z" of Appellants' Formula I.

group in the first instance from a list of numerous other compounds capable of being placed at substituent position "Z" of Claim 37. Lieb *et al.*, for example, at column 3, lines 1-2; column 29, lines 1-47; column 35, lines 45-64; and column 41, lines 20-40. In fact, Lieb *et al.* appears to teach away from using a heterocycle group altogether since substituted phenyl groups are described as being "particularly preferable." *Id.* at column 41, lines 35-40. As such, one of ordinary skill in the art consulting Lieb *et al.* would have no motivation to choose a pyrazolyl group that is not even mentioned in the reference, given the lack of a specific suggestion for choosing pyrazolyl coupled with a list providing numerous additional substituent possibilities. The preference of substituted phenyl groups in the compounds of Lieb *et al.* is further confirmed by Examples I-1-a-1 to Example XLVI-1. Each of these examples sets forth a chlorine substituted phenyl group, for example 4-chlorophenyl, and does not even suggest the addition of a heterocycle group, let alone a pyrazolyl group, at those same positions. Lieb *et al.* at Examples I-1-a-1 to Example XLVI-1.

In rejecting the claims, the Examiner assembles random substituent groups from Lieb *et al.* and generally asserts that one of ordinary skill in the art would have the requisite motivation to modify a heterocycle group into a pyrazolyl group. In making this assertion, the Examiner provides no motivation whatsoever as to why one of ordinary skill in the art would have the motivation to first select a heterocycle group from a list of substituents and then modify the heterocycle group into a substituted pyrazolyl group. This conclusory assertion is incorrect as the Examiner has failed to even "identify some reason that would have led a chemist to modify a known compound in a particular manner to establish *prima facie* obviousness of a new claimed compound." *Takeda Chemical Industries, Ltd v. Alphapharm Pty., Ltd.*, 492 F.3d 1350, 1357, 83 U.S.P.Q.2d 1169, 1174 (Fed. Cir. 2007).

As explained by Judge Rader in a discussion of "obvious to try" analyses in the recent decision *In re Kubin*, 90 U.S.P.Q.2d, 1417, 561 F.3d 1351 (Fed. Cir. 2009), the proper analytical framework requires the consideration of two classes of situations where "obvious to try" can be erroneously equated with obviousness, one of which applies when one varies disclosed parameters until possibly finding a successful result and the other of which applies when prior art gives only general guidance about a new technology or promising field of experimentation (in contrast to the predictable pursuit of known options to arrive at predictable solutions as contemplated by *KSR*). See *In re Kubin*, 90 U.S.P.Q.2d at 1423 (citing and quoting *In re O'Farrell*, 7 U.S.P.Q2d 1673, 1681, 853 F.2d 894, 903 (Fed. Cir. 1988), as well as contrasting *KSR*). When considering the first situation, Judge Rader cautioned that "where a defendant merely throws metaphorical darts at a board filled with

combinatorial prior art possibilities, courts should not succumb to hindsight claims of obviousness." *In re Kubin*, 90 U.S.P.Q.2d at 1423.

Similarly, in rejecting the claims over Lieb *et al.*, the Examiner combines lists of substituent groups, without any specific teaching or motivation, into a single chemical compound. Specifically, the Examiner reviews lists of substituent groups drawn to ring structures, with the preferred structure being phenyl, and reaches the conclusion that one of ordinary skill in the art would have the motivation to choose a pyrazolyl group. However, as previously noted, Lieb *et al.* does not even include pyrazolyl as a possible substituent group. In reaching this determination, the Examiner incorrectly relies on hindsight reconstruction to formulate a "hypothetical" compound including a pyrazolyl group. This is both factually and legally incorrect.

(b) Lieb *et al.* does not teach or suggest the compounds of Claims 37-40 and 61 wherein "Y" is a hydrogen and "W" is a methyl group.

In rejecting the claims, the Examiner further acknowledges that Lieb *et al.* does not teach a compound wherein "W" is a methyl group and "Y" is a hydrogen group.[4] Final Office Action at page 4. In accounting for this deficiency, the Examiner asserts that one of ordinary skill in the art would have the requisite motivation to create compounds where a hydrogen group and an adjacent methyl group would isomerize. *Id.* at page 4. Appellants respectfully disagree with this assertion.

Outside of general hindsight reconstruction, the Examiner provides no motivation whatsoever to alter the compounds of Lieb *et al.* such that a hydrogen and methyl would isomerize at positions "W" and "Y," respectfully. Moreover, while Lieb *et al.* teaches isomers generally, Lieb *et al.* does not specifically teach or suggest creating isomer forms at these respective positions. Lieb *et al.* at column 5, lines 56-67. Specifically, Lieb *et al.* indicates that positions capable of isomerizing are represented by a "dashed line." Lieb *et al.*, for example, at column 12, lines 32-56. However, Lieb *et al.* does not indicate that any substituent group, let alone a hydrogen and methyl group, at relative substituent positions "W" and "Y," are capable of being isomers.

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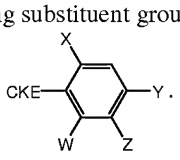
[4] The corresponding substituent groups in Lieb *et al.* are where "W" would be a methyl group and "Z" would be a hydrogen group, 

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(2) The Examiner erred in dismissing Appellants' Declaration as being insufficient.

The Examiner incorrectly dismissed the 37 C.F.R. § 1.132 Declarations of Dr. Heinz Kehne and Dr. Olga Malsam ("Declaration") as being "insufficient." Final Office Action at page 5. In doing so, the Examiner asserts that "Applicant has not shown unexpected results" and that "[t]he declaration fails to compare the instantly claimed compounds with the closest prior art compound." *Id.* The Examiner further asserts that "[t]he comparative data only discloses data for chlorine substituted phenyl group and not a hetaryl." *Id.* at page 6. Appellants disagree with the Examiner's rejection.

The Examiner's rejection of the Declaration for allegedly failing to compare the claimed compounds with the "closest prior art compound" lacks a basis. For one, the Examiner provides no basis for the assertion that a comparison between the chlorinated Compound I-1-a-1 of the Declaration and the chlorinated phenyl Compound I-1-a-16 of Lieb *et al.* is an improper one. Moreover, the Examiner fails to provide any rationale for why chlorinated Compound I-1-a-1 must be compared with one of the hetaryl groups as set forth in column 29, lines 1-45 of Lieb *et al.*, particularly in view of the stated preference for phenyl groups.[5]

Without being limited, one difference between the compared compounds as noted by the Examiner is that Compound I-1-a-1 of the Declaration includes a chlorine substituted pyrazolyl and Compound I-1-a-16 of Lieb *et al.* includes a chlorine substituted phenyl group. However, as discussed in Section (1)(a) above, Lieb *et al.* teach specific compounds in the examples which include chlorine substituted phenyl groups. Lieb *et al.* at Examples I-1-a-1 to Example XLVI-1. None of the specific compounds set forth in these same examples teach or suggest a hetaryl group at position "Y," let alone a pyrazolyl group at position "Y."[6] Rather, at best, Lieb *et al.* sets forth groups of prophetic compound combinations, such as those cited by the Examiner in column 29, lines 1-45, without any motivation or suggestion to combine one specific substituent group verses another. As such, one of skill in the art

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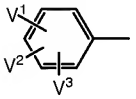
[5] As previously pointed out in the Response to Office Action submitted on August 10, 2009, Appellants note that the Examiner did not include the following preferred substituted phenyl group, which is present in the list in column 29 of Lieb *et al.*, in the recitation of possible substituent groups on pages 5-6 of the Final Office Action mailed June 10, 2009: 

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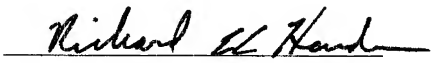
[6] The corresponding substituent group in Appellants' Formula I where a substituted pyrazolyl group is selected is "Z."

would not readily recognize the groups of the prophetic compounds referred to in column 29, lines 1-45 of Lieb *et al.* as the "closest" art. Without more, the Examiner's basis for challenging the Declaration is improper.

Moreover, the Examiner's assertion that compounds including a chloro substituted phenyl group provide an inadequate comparison to Compound I-1-a-1 of the Declaration is misplaced as "[a]pplicants may compare the claimed invention with prior art that is more closely related to the invention than the prior art relied upon by the examiner." MPEP § 716.02(e)(I). For example, in *Ex Parte Humber*, the Board determined that a comparison of chemical properties in a Declaration between a compound with a chloro group at position 13 and compounds with a 9 chloro, 12 chloro, and 14 chloro was proper and rebutted a presumption of *prima facie* obviousness. 217 U.S.P.Q. 265 (Bd. App. 1961). That is, the Board determined that it was proper to compare one set of chloro associated compounds with another set of chloro associated compounds in evaluating unexpected results. Similarly, chlorinated Compound I-1-a-1 of the Declaration and the chlorinated phenyl Compound I-1-a-16 of Lieb *et al.* both contain chloro groups and share a common structure with the exception of a pyrazolyl to phenyl substitution. Accordingly, Appellants respectfully request that the Board consider the unexpected properties set forth in the Declaration based on the comparison of Compound I-1-a-1 of the Declaration and the Compound I-1-a-16 of Lieb *et al.*

Appellants respectfully submit that the Examiner has not set forth a proper *prima facie* case of obviousness because he has not articulated any reasoning based on rational underpinnings to support the legal conclusion of obviousness. In conclusion, Appellants respectfully submit that Claims 37-40 and 61 are not unpatentable over Lieb *et al.* and respectfully the request the Board to reverse the rejections.

Respectfully submitted,

By 

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Date: December 2, 2009

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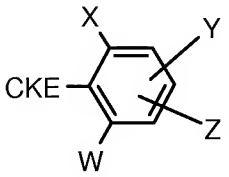
Claims Appendix

Claims 1-36 (Canceled).

Claim 37 (Previously Presented): A compound of formula (I)



(I)

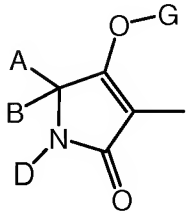
in which

X represents halogen, C_1-C_6-alkyl, C_1-C_6-alkenyl, C_1-C_6-alkynyl, C_1-C_6-haloalkyl, C_1-C_6-alkoxy, C_3-C_6-alkenyloxy, C_1-C_6-alkylthio, C_1-C_6-alkylsulphinyl, C_1-C_6-alkylsulphonyl, C_1-C_6-haloalkoxy, C_3-C_6-haloalkenyloxy, nitro, or cyano; or represents phenyl, phenoxy, phenylthio, benzyloxy, or benzylthio, each of which is optionally mono- or disubstituted by halogen, C_1-C_6-alkyl, C_1-C_6-alkoxy, C_1-C_4-haloalkyl, C_1-C_4-haloalkoxy, nitro, or cyano,

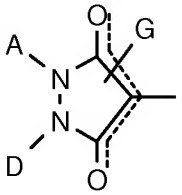
W and Y independently of one another represent hydrogen, halogen, C_1-C_6-alkyl, C_1-C_6-alkenyl, C_1-C_6-alkynyl, C_1-C_6-haloalkyl, C_1-C_6-alkoxy, C_1-C_6-haloalkoxy, nitro, or cyano,

Z represents optionally substituted pyrazolyl or benzpyrazolyl, and

CKE represents one of the groups



(1), or



(8),

in which

A represents hydrogen; represents C_1-C_{12}-alkyl, C_3-C_8-alkenyl, C_1-C_{10}-alkoxy-C_1-C_8-alkyl, or C_1-C_{10}-alkylthio-C_1-C_6-alkyl, each of which is optionally mono- to pentasubstituted by halogen; represents C_3-C_8-cycloalkyl that is optionally mono- to trisubstituted by halogen, C_1-C_6-alkyl, C_1-C_2-haloalkyl, or C_1-C_6-alkoxy and in which one or two ring members that are not

directly adjacent are optionally replaced by oxygen and/or sulphur; or represents phenyl, naphthyl, hetaryl having 5 or 6 ring atoms, phenyl-C_1-C_6-alkyl, or naphthyl-C_1-C_6-alkyl, each of which is optionally mono- to trisubstituted by halogen, C_1-C_6-alkyl, C_1-C_6-haloalkyl, C_1-C_6-alkoxy, C_1-C_6-haloalkoxy, cyano, or nitro,

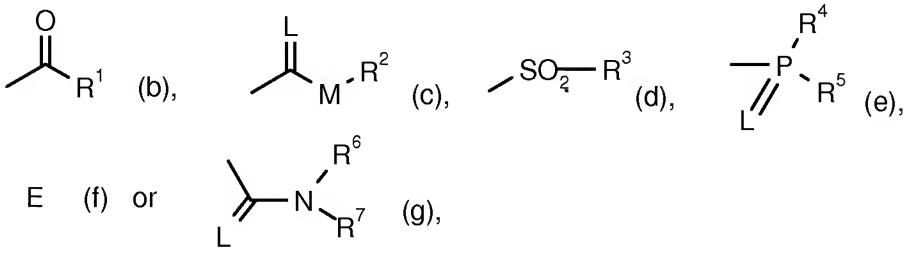
B represents hydrogen, C_1-C_{12}-alkyl, or C_1-C_8-alkoxy-C_1-C_6-alkyl, or

A, B and the carbon atom to which they are attached represent saturated C_3-C_{10}-cycloalkyl or unsaturated C_5-C_{10}-cycloalkyl in which one ring member is optionally replaced by oxygen or sulphur and that are optionally mono- or disubstituted by C_1-C_8-alkyl, C_3-C_{10}-cycloalkyl, C_1-C_8-haloalkyl, C_1-C_8-alkoxy, C_1-C_8-alkylthio, halogen, or phenyl,

D represents hydrogen; represents C_1-C_{12}-alkyl, C_3-C_8-alkenyl, C_3-C_8-alkynyl, or C_1-C_{10}-alkoxy-C_1-C_8-alkyl, each of which is optionally mono- to pentasubstituted by halogen; represents C_3-C_8-cycloalkyl that is optionally mono- to trisubstituted by halogen, C_1-C_4-alkyl, C_1-C_4-alkoxy, or C_1-C_4-haloalkyl and in which one ring member is optionally replaced by oxygen or sulphur; or represents phenyl, hetaryl having 5 or 6 ring atoms, phenyl-C_1-C_6-alkyl, or hetaryl-C_1-C_6-alkyl having 5 or 6 ring atoms, each of which radicals is optionally mono- to trisubstituted by halogen, C_1-C_6-alkyl, C_1-C_6-haloalkyl, C_1-C_6-alkoxy, C_1-C_6-haloalkoxy, cyano, or nitro, or

A and D together represent C_3-C_6-alkanediyl or C_3-C_6-alkenediyl in which one methylene group is optionally replaced by a carbonyl group, oxygen, and

G represents hydrogen (a) or represents one of the groups



in which

E represents a metal ion equivalent or an ammonium ion,

L represents oxygen or sulphur, and

M represents oxygen or sulphur,

R^1 represents C_1-C_{20}-alkyl, C_2-C_{20}-alkenyl, C_1-C_8-alkoxy-C_1-C_8-alkyl, C_1-C_8-alkylthio-C_1-C_8-alkyl, or poly-C_1-C_8-alkoxy-C_1-C_8-alkyl, each of which is optionally mono- to pentasubstituted by halogen; represents C_3-C_8-cycloalkyl that is optionally mono- to trisubstituted by halogen, C_1-C_6-alkyl, or C_1-C_6-alkoxy and in which one or more ring members that are not directly adjacent are optionally replaced by oxygen and/or sulphur; represents phenyl that is optionally mono- to trisubstituted by halogen, cyano, nitro, C_1-C_6-alkyl, C_1-C_6-alkoxy, C_1-C_6-haloalkyl, C_1-C_6-haloalkoxy, C_1-C_6-alkylthio, or C_1-C_6-alkylsulphonyl; represents phenyl-C_1-C_6-alkyl that is optionally mono- to trisubstituted by halogen, nitro, cyano, C_1-C_6-alkyl, C_1-C_6-alkoxy, C_1-C_6-haloalkyl, or C_1-C_6-haloalkoxy; represents 5- or 6-membered hetaryl that is optionally mono- or disubstituted by halogen or C_1-C_6-alkyl; represents phenoxy C_1-C_6-alkyl that is optionally mono- or disubstituted by halogen or C_1-C_6-alkyl; or represents 5- or 6-membered hetaryloxy C_1-C_6-alkyl that is optionally mono- or disubstituted by halogen, amino, or C_1-C_6-alkyl,

R^2 represents C_1-C_{20}-alkyl, C_2-C_{20}-alkenyl, C_1-C_8-alkoxy-C_2-C_8-alkyl, or poly-C_1-C_8-alkoxy-C_2-C_8-alkyl, each of which is optionally mono- to pentasubstituted by halogen; represents C_3-C_8-cycloalkyl that is optionally mono- or disubstituted by halogen, C_1-C_6-alkyl, or C_1-C_6-alkoxy; or represents phenyl or benzyl, each of which is optionally mono- to trisubstituted by halogen, cyano, nitro, C_1-C_6-alkyl, C_1-C_6-alkoxy, C_1-C_6-haloalkyl, or C_1-C_6-haloalkoxy,

R^3 represents C_1-C_8-alkyl that is optionally mono- to nonasubstituted by halogen; or represents phenyl or benzyl, each of which is optionally mono- to trisubstituted by halogen, C_1-C_6-alkyl, C_1-C_6-alkoxy, C_1-C_4-haloalkyl, C_1-C_4-haloalkoxy, cyano, or nitro,

R^4 and R^5 independently of one another represent C_1-C_8-alkyl, C_1-C_8-alkoxy, C_1-C_8-alkylamino, di(C_1-C_8-alkyl)amino, C_1-C_8-alkylthio, C_2-C_8-alkenylthio,

or C_3-C_7-cycloalkylthio, each of which is optionally mono- to pentasubstituted by halogen; or represent phenyl, phenoxy, or phenylthio, each of which is optionally mono- to trisubstituted by halogen, nitro, cyano, C_1-C_4-alkoxy, C_1-C_4-haloalkoxy, C_1-C_4-alkylthio, C_1-C_4-haloalkylthio, C_1-C_4-alkyl, or C_1-C_4-haloalkyl,

R^6 and R^7 independently of one another represent hydrogen; represent C_1-C_8-alkyl, C_3-C_8-cycloalkyl, C_1-C_8-alkoxy, C_3-C_8-alkenyl, or C_1-C_8-alkoxy-C_1-C_8-alkyl, each of which is optionally mono- to pentasubstituted by halogen; represent phenyl that is optionally mono- to trisubstituted by halogen, C_1-C_8-haloalkyl, C_1-C_8-alkyl, or C_1-C_8-alkoxy; or represent benzyl that is optionally mono- to trisubstituted by halogen, C_1-C_8-alkyl, C_1-C_8-haloalkyl, or C_1-C_8-alkoxy; or R^6 and R^7 together represent a C_3-C_6-alkylene radical that is optionally mono- or disubstituted by C_1-C_4-alkyl and in which one carbon atom is optionally replaced by oxygen or sulphur,

R^{13} represents hydrogen; represents C_1-C_8-alkyl or C_1-C_8-alkoxy, each of which is optionally mono- to trisubstituted by halogen; represents C_3-C_8-cycloalkyl that is optionally mono- to trisubstituted by halogen, C_1-C_4-alkyl, or C_1-C_4-alkoxy and in which one methylene group is optionally replaced by oxygen or sulphur; or represents phenyl, phenyl-C_1-C_4-alkyl, or phenyl-C_1-C_4-alkoxy, each of which is optionally mono- or disubstituted by halogen, C_1-C_6-alkyl, C_1-C_6-alkoxy, C_1-C_4-haloalkyl, C_1-C_4-haloalkoxy, nitro, or cyano,

R^{14} represents hydrogen or C_1-C_8-alkyl, or

R^{13} and R^{14} together represent C_4-C_6-alkanediyl,

R^{15} and R^{16} are identical or different and represent C_1-C_6-alkyl, or

R^{15} and R^{16} together represent a C_2-C_4-alkanediyl radical that is optionally mono- or disubstituted by C_1-C_6-alkyl or C_1-C_6-haloalkyl, or by phenyl that is optionally mono- or disubstituted by halogen, C_1-C_6-alkyl, C_1-C_4-haloalkyl, C_1-C_6-alkoxy, C_1-C_4-haloalkoxy, nitro, or cyano,

R^{17} and R^{18} independently of one another represent hydrogen; represent optionally halogen-substituted C_1-C_8-alkyl; or represent phenyl that is optionally mono- or disubstituted by halogen, C_1-C_6-alkyl, C_1-C_6-alkoxy, C_1-C_4-haloalkyl, C_1-C_4-haloalkoxy, nitro, or cyano, or

R^{17} and R^{18} together with the carbon atom to which they are attached represent a carbonyl group or represent C_5-C_7-cycloalkyl that is optionally mono- or disubstituted by halogen, C_1-C_4-alkyl, or C_1-C_4-alkoxy and in which one methylene group is optionally replaced by oxygen or sulphur, and

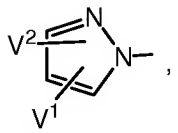
R^{19} and R^{20} independently of one another represent C_1-C_{10}-alkyl, C_2-C_{10}-alkenyl, C_1-C_{10}-alkoxy, C_1-C_{10}-alkylamino, C_3-C_{10}-alkenylamino, di(C_1-C_{10}-alkyl)amino, or di(C_3-C_{10}-alkenyl)amino.

Claim 38 (Previously Presented): A compound of formula (I) according to Claim 37 in which

X represents fluorine, chlorine, bromine, C_1-C_4-alkyl, C_1-C_4-alkoxy, C_1-C_4-haloalkyl, C_1-C_4-haloalkoxy, nitro, or cyano,

W and Y independently of one another represent hydrogen, fluorine, chlorine, bromine, C_1-C_4-alkyl, C_1-C_4-haloalkyl, C_1-C_4-alkoxy, or C_1-C_4-haloalkoxy,

Z represents



,

in which

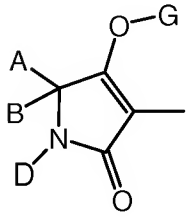
V^1 represents hydrogen, fluorine, chlorine, bromine, iodine, C_1-C_6-alkyl, C_1-C_4-alkoxy, C_1-C_4-haloalkyl, C_1-C_4-haloalkoxy, cyano, or nitro, and

V^2 represents hydrogen, fluorine, chlorine, bromine, C_1-C_4-alkyl, or C_1-C_2-haloalkyl, or

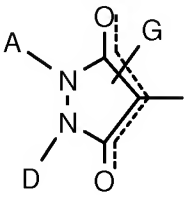
V^1 and V^2 together represent C_3-C_4-alkanediyl that is optionally mono- to tetrasubstituted by fluorine and that is optionally interrupted once or twice by oxygen; or represent butadienyl that is optionally mono- or disubstituted by

fluorine, chlorine, bromine, C_1-C_4-alkyl, C_1-C_4-alkoxy, C_1-C_2-haloalkyl, C_1-C_2-haloalkoxy, cyano, or nitro, and

CKE represents one of the groups



(1), or



(8),

in which

A represents hydrogen, represents C_1-C_6-alkyl, or C_1-C_4-alkoxy-C_1-C_2-alkyl, each of which is optionally mono- to trisubstituted by fluorine or chlorine; represents C_3-C_6-cycloalkyl that is optionally mono- or disubstituted by fluorine, chlorine, C_1-C_2-alkyl, trifluoromethyl, or C_1-C_2-alkoxy; or, except for compounds in which CKE is (3), (4), (6), or (7), represents phenyl or benzyl, each of which is optionally mono- or disubstituted by fluorine, chlorine, bromine, C_1-C_4-alkyl, C_1-C_2-haloalkyl, C_1-C_4-alkoxy, C_1-C_2-haloalkoxy, cyano, or nitro,

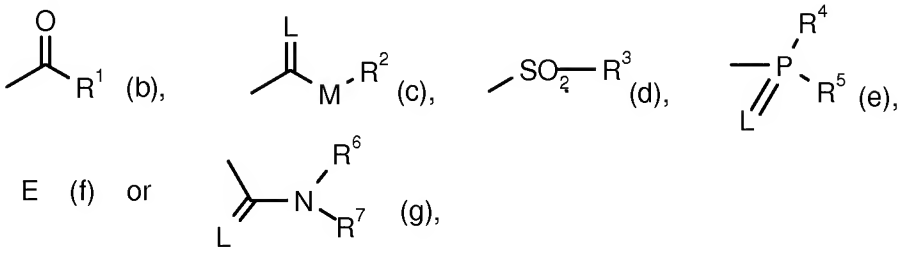
B represents hydrogen, C_1-C_4-alkyl, or C_1-C_2-alkoxyl-C_1-C_2-alkyl or

A, B, and the carbon atom to which they are attached represent saturated C_3-C_7-cycloalkyl or unsaturated C_5-C_7-cycloalkyl in which one ring member is optionally replaced by oxygen or sulphur and that is optionally mono- or disubstituted by C_1-C_6-alkyl, trifluoromethyl or C_1-C_6-alkoxy,

D represents hydrogen; represents C_1-C_6-alkyl, C_3-C_6-alkenyl, or C_1-C_4-alkoxy-C_2-C_3-alkyl, each of which is optionally mono- to trisubstituted by fluorine; represents C_3-C_6-cycloalkyl that is optionally mono- or disubstituted by C_1-C_4-alkyl, C_1-C_4-alkoxy, or C_1-C_2-haloalkyl and in which one methylene group is optionally replaced by oxygen; or, except for compounds in which CKE is (1), represents phenyl or pyridyl, each of which is optionally mono- or disubstituted by fluorine, chlorine, bromine, C_1-C_4-alkyl, C_1-C_4-haloalkyl, C_1-C_4-alkoxy, or C_1-C_4-haloalkoxy, or

A and D together represent C_3-C_5-alkanediyl in which one methylene group is optionally replaced by oxygen, and

G represents hydrogen (a) or represents one of the groups



in which

E represents a metal ion equivalent or an ammonium ion,

L represents oxygen or sulphur

M represents oxygen or sulphur,

R^1 represents C_1-C_8-alkyl, C_2-C_8-alkenyl, C_1-C_4-alkoxy-C_1-C_2-alkyl, or C_1-C_4-alkylthio-C_1-C_2-alkyl, each of which is optionally mono- to trisubstituted by fluorine or chlorine; represents C_3-C_6-cycloalkyl that is optionally mono- or disubstituted by fluorine, chlorine, C_1-C_2-alkyl, or C_1-C_2-alkoxy and in which optionally one or two ring members that are not directly adjacent are replaced by oxygen; or represents phenyl that is optionally mono- or disubstituted by fluorine, chlorine, bromine, cyano, nitro, C_1-C_4-alkyl, C_1-C_4-alkoxy, C_1-C_2-haloalkyl, or C_1-C_2-haloalkoxy,

R^2 represents C_1-C_8-alkyl, C_2-C_8-alkenyl, or C_1-C_4-alkoxy-C_2-C_4-alkyl, each of which is optionally mono- to trisubstituted by fluorine; represents C_3-C_6-cycloalkyl that is optionally monosubstituted by C_1-C_2-alkyl or C_1-C_2-alkoxy; or represents phenyl or benzyl, each of which is optionally mono- or disubstituted by fluorine, chlorine, bromine, cyano, nitro, C_1-C_4-alkyl, C_1-C_3-alkoxy, trifluoromethyl, or trifluoromethoxy,

R^3 represents C_1-C_6-alkyl that is optionally mono- to trisubstituted by fluorine; or represents phenyl or benzyl, each of which is optionally monosubstituted by fluorine, chlorine, bromine, C_1-C_4-alkyl, C_1-C_4-alkoxy, trifluoromethyl, trifluoromethoxy, cyano, or nitro,

R^4 represents C_1-C_6-alkyl, C_1-C_6-alkoxy, C_1-C_6-alkylamino, di(C_1-C_6-alkyl)amino, C_1-C_6-alkylthio, C_3-C_4-alkenylthio, or C_3-C_6-cycloalkylthio, each of which is optionally mono- to trisubstituted by fluorine; or represents phenyl, phenoxy, or phenylthio, each of which is optionally mono- or disubstituted by fluorine, chlorine, bromine, nitro, cyano, C_1-C_3-alkoxy, C_1-C_3-haloalkoxy, C_1-C_3-alkylthio, C_1-C_3-haloalkylthio, C_1-C_3-alkyl, or trifluoromethyl,

R^5 represents C_1-C_6-alkoxy or C_1-C_6-alkylthio,

R^6 represents hydrogen; represents C_1-C_6-alkyl, C_3-C_6-cycloalkyl, C_1-C_6-alkoxy, C_3-C_6-alkenyl, or C_1-C_6-alkoxy-C_1-C_4-alkyl, each of which is optionally mono- to trisubstituted by fluorine; represents phenyl that is optionally mono- or disubstituted by fluorine, chlorine, bromine, trifluoromethyl, C_1-C_4-alkyl, or C_1-C_4-alkoxy; represents benzyl that is optionally monosubstituted by fluorine, chlorine, bromine, C_1-C_4-alkyl, trifluoromethyl, or C_1-C_4-alkoxy, and

R^7 represents C_1-C_6-alkyl, C_3-C_6-alkenyl, or C_1-C_6-alkoxy-C_1-C_4-alkyl, or

R^6 and R^7 together represent a C_4-C_5-alkylene radical that is optionally mono- or disubstituted by methyl or ethyl and in which a methylene group is optionally replaced by oxygen or sulphur.

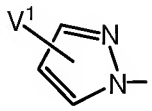
Claim 39 (Previously Presented): A compound of formula (I) according to Claim 37 in which

W represents hydrogen, methyl, ethyl, or chlorine,

X represents chlorine, methyl, ethyl, propyl, methoxy, ethoxy, propoxy, trifluoromethyl, difluoromethoxy, or trifluoromethoxy,

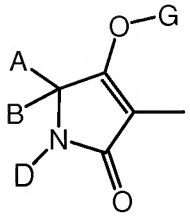
Y represents hydrogen or methyl,

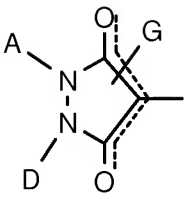
Z represents



in which V^1 represents hydrogen, fluorine, chlorine, bromine, methyl, ethyl, methoxy, ethoxy, trifluoromethyl, or cyano, and

CKE represents one of the groups



(1), or


(8),

in which

A represents hydrogen; represents C_1-C_4-alkyl or C_1-C_2-alkoxy-C_1-C_2-alkyl, each of which is optionally mono- to trisubstituted by fluorine; represents cyclopropyl, cyclopentyl, or cyclohexyl; or, when CKE is (5), represents phenyl that is optionally mono- or disubstituted by fluorine, chlorine, bromine, methyl, ethyl, n-propyl, isopropyl, methoxy, ethoxy, trifluoromethyl, trifluoromethoxy, cyano, or nitro,

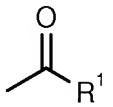
B represents hydrogen, methyl, or ethyl, or

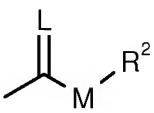
A, B, and the carbon atom to which they are attached represent saturated C_5-C_6-cycloalkyl in which one ring member is optionally replaced by oxygen or sulphur and that is optionally monosubstituted by methyl, ethyl, propyl, isopropyl, trifluoromethyl, methoxy, ethoxy, propoxy, butoxy, or isobutoxy,

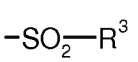
D represents hydrogen; represents C_1-C_4-alkyl, C_3-C_4-alkenyl, or C_1-C_4-alkoxy-C_1-C_3-alkyl, each of which is optionally mono- to trisubstituted by fluorine; represents cyclopropyl, cyclopentyl, or cyclohexyl; or, except when CKE is (1), represents pyridyl or phenyl that is optionally monosubstituted by fluorine, chlorine, methyl, ethyl, n-propyl, isopropyl, methoxy, ethoxy, or trifluoromethyl, or

A and D together represent C_3-C_5-alkanediyl that is optionally mono- or disubstituted by methyl or methoxy, and

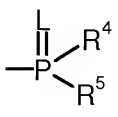
G represents hydrogen (a) or represents one of the groups

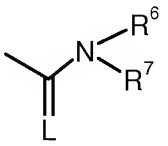


(b),


(c),


(d),



(e), E (f) or


(g),

in which

E represents a metal ion equivalent or an ammonium ion,

L represents oxygen or sulphur

M represents oxygen or sulphur,

R^1 represents C_1-C_6-alkyl, C_2-C_6-alkenyl, C_1-C_2-alkoxy-C_1-alkyl, or C_1-C_2-alkylthio-C_1-alkyl, each of which is optionally mono- to trisubstituted by fluorine; represents cyclopropyl or cyclohexyl, each of which is optionally monosubstituted by fluorine, chlorine, methyl, or methoxy; represents phenyl that is optionally monosubstituted by fluorine, chlorine, bromine, cyano, nitro, methyl, methoxy, trifluoromethyl, or trifluoromethoxy,

R^2 represents C_1-C_8-alkyl, C_2-C_6-alkenyl, or C_1-C_4-alkoxy-C_2-C_3-alkyl, each of which is optionally monosubstituted by fluorine; or represents phenyl or benzyl, each of which is optionally monosubstituted by fluorine, chlorine, cyano, nitro, methyl, ethyl, n-propyl, i-propyl, methoxy, ethoxy, trifluoromethyl, or trifluoromethoxy,

R^3 represents methyl, ethyl, n-propyl, or isopropyl, each of which is optionally mono- to trisubstituted by fluorine; or represents phenyl or benzyl, each of which is optionally monosubstituted by fluorine, chlorine, bromine, methyl, tert-butyl, methoxy, trifluoromethyl, trifluoromethoxy, cyano, or nitro,

R^4 represents C_1-C_4-alkyl, C_1-C_4-alkoxy, C_1-C_4-alkylamino, di(C_1-C_4-alkyl)amino, or C_1-C_4-alkylthio, each of which is optionally mono- to trisubstituted by fluorine; or represents phenyl, phenoxy, or phenylthio, each of which is optionally monosubstituted by fluorine, chlorine, bromine, nitro, cyano, C_1-C_2-alkoxy, C_1-C_2-fluoroalkoxy, C_1-C_2-alkylthio, C_1-C_2-fluoroalkylthio, or C_1-C_3-alkyl,

R^5 represents methoxy, ethoxy, propoxy, butoxy, methylthio, ethylthio, propylthio, or butylthio,

R^6 represents hydrogen; represents C_1-C_4-alkyl, C_3-C_6-cycloalkyl, C_1-C_4-alkoxy, C_3-C_4-alkenyl, or C_1-C_4-alkoxy-C_1-C_4-alkyl, each of which is optionally mono- to trisubstituted by fluorine; represents

phenyl that is optionally monosubstituted by fluorine, chlorine, bromine, trifluoromethyl, methyl, or methoxy; or represents benzyl that is optionally monosubstituted by fluorine, chlorine, bromine, methyl, trifluoromethyl, or methoxy, and

R^7 represents methyl, ethyl, propyl, isopropyl, butyl, isobutyl, or allyl, or

R^6 and R^7 represent a C_4-C_5-alkylene radical in which one methylene group is optionally replaced by oxygen or sulphur.

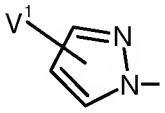
Claim 40 (Previously Presented): A compound of formula (I) according to Claim 37 in which

W represents hydrogen, methyl, or ethyl,

X represents chlorine, methyl, or ethyl,

Y represents hydrogen,

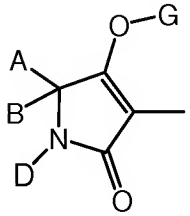
Z represents, in the 4- or 5-position, the group



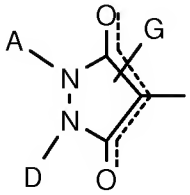
,

in which V^1 represents chlorine or methoxy, and

CKE represents one of the groups



(1), or



(8),

in which

A represents hydrogen, C_1-C_4-alkyl, or cyclopropyl,

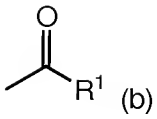
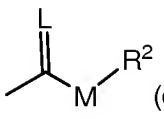
B represents hydrogen or methyl, or

A, B, and the carbon atom to which they are attached represent saturated C_5-C_6-cycloalkyl in which one ring member is optionally replaced by oxygen and that is optionally monosubstituted by methyl or methoxy,

D represents hydrogen, or

A and D together represent C_3-C_5-alkanediyl in which one carbon atom is optionally replaced by oxygen, and

G represents hydrogen (a) or represents one of the groups


(b) or 
(c) ,

in which

L represents oxygen,

M represents oxygen or sulphur,

R^1 represents C_1-C_6-alkyl or C_1-C_2-alkoxy-C_1-alkyl, and

R^2 represents C_1-C_8-alkyl or benzyl.

Claims 41-60 (Canceled).

Claim 61 (Previously Presented): A composition comprising one or more compounds of formula (I) according to Claim 37 and one or more extenders and/or surfactants.

Claims 62-70 (Canceled).

Evidence Appendix

NONE

Related Proceedings Appendix

NONE